

REVIEWS AND APPROVALS

MASON NECK NATIONAL WILDLIFE REFUGE
Lorton, Virginia

MARUMSCO NATIONAL WILDLIFE REFUGE
FEATHERSTONE NATIONAL WILDLIFE REFUGE
Woodbridge, Virginia

ANNUAL NARRATIVE REPORT

Calendar Year 1985

<u>Thomas W. Stewart</u>	<u>2-26-86</u>	<u>Edward A. Mores</u>	<u>3/25/86</u>
Refuge Manager	Date	Refuge Supervisor Review	Date
<u>Donald H. Young</u>			<u>3/31/86</u>
Regional Office Approval			Date

INTRODUCTION

The Mason Neck National Wildlife Refuge is located in Virginia, 18 miles south of Washington, D.C. Nestled on an 8,000 acre boot-shaped peninsula jutting out into the Potomac River, the refuge is dominated by mixed hardwood/evergreen forests, high bluffs, and about 300 acres of freshwater marshes. From the initial acquisition of 845 acres in 1969, Mason Neck has grown to 1,980 acres, including 789 acres leased in 1982 from the Northern Virginia Regional Park Authority. Only one private inholding of 296 acres remains.

The refuge was established in 1969 as the Nation's first bald eagle refuge using funds provided under the Endangered Species Act. Eagles have nested and wintered on the peninsula since before the 1700's. Currently, only one nest, located on the leased land, is active and an average of ten eagles use the refuge each winter.

Though located within easy driving distance for approximately 10 million residents of Virginia, Maryland, and Washington, D.C., the refuge has an annual visitation of under 10,000 people. This is due to limited public use facilities and competition from over 400 nearby Federal, state, regional, county and city parks.

Until 1974, Mason Neck National Wildlife Refuge was a subunit of Blackwater National Wildlife Refuge. It then became an independent unit with a manager and two subunits of its own, Featherstone National Wildlife Refuge and Marumsco National Wildlife Refuge totalling 164 and 63 acres respectively.

The office is located in Woodbridge, Virginia, less than 9 miles from Mason Neck and only a mile from Marumsco and Featherstone refuges.

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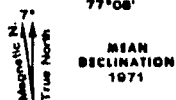
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**UNITED STATES
FISH AND WILDLIFE SERVICE**



A. HIGHLIGHTS

Eagles abandon eggs, possibly because of low flying helicopters. (Section G.2).

Maintenanceman is converted to PFT. (Section E.1).

Record year for eagles on Mason Neck. (Section G.2).

Two pole sheds constructed; equipment and environmental education. (Section I.1).

New nature trail opened for winter use. (Section H.4).

Six deer poachers nabbed in the act of interstate transport. (Section H.17).

New state park opens. (Section J.1).

B. CLIMATIC CONDITIONS

Total annual precipitation was 38.54 inches, approximately normal for this area. However, precipitation was unevenly distributed throughout the year with 43 percent of annual precipitation occurring during September, October and November. Spring and early summer precipitation was well below normal resulting in most refuge tributaries becoming dry by early summer. November was the wettest month with 6.30 inches and April was driest with 0.18 inches. Snowfall totalled 11.50 inches, all of it occurring during December and January.

Temperatures exceeded 90° on 29 days and dropped below 0° on 2 days during 1985. Temperature extremes were 98° on August 14 and -6° on January 21.



Debris covering trail to observation platform after hurricane Gloria. 11/85 RW



During - Great Marsh flooded by hurricane Gloria. 11/85 RW



After - Great Marsh with water down and filled with sediment and litter. 11/85 RW

C. LAND ACQUISITION

1. Fee Title

Negotiations continued throughout 1985 towards acquisition of a 296 acre inholding. The landowner and the Fish and Wildlife Service were far apart on assessed value and the property was placed in condemnation proceedings during 1985.

3. Other

In 1982, 789 acres of land belonging to the Northern Virginia Regional Park Authority were leased to the refuge for a period of 60 years. However, the lease is contingent upon our acquiring the private inholding previously discussed and can be revoked by the Park Authority at any time until such acquisition.

D. PLANNING

4. Compliance with Environmental Mandates

On April 2, 1985, Refuge Manager Stewart was granted permission by the Regional Office to develop a new parking area along Gunston Road with a foot trail (Great Marsh Trail) extending westward to the Great Marsh. An environmental assessment was determined unnecessary because of Categorical Exclusion 1.4E.



Entrance to new Great Marsh Trail and parking lot. 12/85 RW

*It's good to see a
refuge used for quality scientific
studies like these.
fww*

5. Research and Investigations

Mason Neck NR85-"A Study of Feeding, Roosting, and Perching Behavior of the Bald Eagle" (51610-1)

In 1981 Susan Haines began monitoring bald eagle activity on the Mason Neck peninsula including property owned by the U.S. Fish and Wildlife Service; Mason Neck State Park; Northern Virginia Regional Park Authority; and Gunston Hall Plantation. The study was to determine any changes caused by the development and opening of the state park in 1983. The state park's opening was delayed until the spring of 1985 and Ms. Haines' data collected so far reflects little of the state park's impact, as originally intended.

Observations made in 1985 included a new peak population of 20 eagles in the roost in November and mating behavior at the nest site in December.

Mason Neck NR85-"Long-term Ecological Studies of Box Turtles, Terrapene carolina, at the Mason Neck NWR (51610-5)

The objective for this long-range project is to gather data on population dynamics, survivorship, seasonality, reproduction, growth, biomass, and temperature relationships of box turtles for comparison with similar studies being conducted elsewhere. During 1984 and 1985, 144 box turtles were hand collected, measured and weighed, marked, and released on the point beyond the Great Marsh along Sycamore Road. Several have been captured more than once, and eventually population size, size range, and density will be determined from recaptures. Dr. Carl Ernst of George Mason University and three assistants were involved in 1985 for a total of 49 man-hours.

The last 2 years have been used to build a reference stock of marked turtles.

Mason Neck NR85-"Biological Studies of Peoriine Moths (Lepidoptera: Pyralidae)" (51610-6)

The goal of this project was to determine the life histories and establish host plants for several species of the Peoriine moths, of which 30 species are found in North America. Working with one assistant, Dr. Jay C. Shaffer from George Mason University spent 70 hours attracting and catching adult moths with a blacklight and examining grasses for larvae and egg masses. He found four species including Peoria approximella, P. roseotinctella, P. bipartitella, and Atascosa glareosella. P. bipartitella has only been recorded once before in Virginia and this was the first state record for A. glareosella. He was able to hatch and rear two of these species P. approximella and A. glareosella, through their early instars in the lab and is working on techniques for rearing larvae on artificial media with some plant tissue added as a feeding stimulus.

Mason Neck NR85-"Population Ecology and Demography
of Freshwater Turtles" (51610-7)

The object of this study is to determine population structure, estimate density, and gather appropriate life history and demographic information for constructing life tables. Also to ascertain the general ecology of the freshwater turtle species inhabiting the Potomac River and associated aquatic habitats adjacent to Mason Neck. Dr. J. Whitfield Gibbons and his son spent the summer catching and marking turtles and will return in 1986 to again sample the turtles and compare data.



During slow moments, Gibbons and his son marked water snakes for supplemental population studies. 6/85 YS

Mason Neck NR85-"Seasonal Habitat Use by Birds of
the Mason Neck NWR" (51610-8)

Graduate student Kevin Ballard is conducting a study of seasonal habitat use by small land birds in the area near the end of Sycamore Road on the Mason Neck Refuge. In the period from May 25, 1985, to September 11, 1985, approximately 300 man-hours were spent banding and censusing birds. He and his assistants captured and banded 149 individuals of 30 species using nine mist nets that were placed in three habitat types: upland forest, flooded forest, and marsh. Numerous recaptures of banded birds have provided preliminary data on the territories and movements of certain species. He plans to continue this study in 1986 and to focus closely on

one of the most abundant species, the Prothonotary Warbler, by color banding individuals of this species so that movements of individual birds can be monitored by repeated sightings.



Kevin Ballard banding song birds.

5/85 YS

E. ADMINISTRATION

1. Personnel

A real boost for refuge operations occurred in 1985 when temporary maintenance worker Robert (Bob) Westerman was converted to permanent full-time. Mr. Westerman was converted under the Veterans Readjustment Appointment, which confers permanent full-time status while undergoing a 2 year training program designed with project leader and Regional Office assistance. At the completion of the 2 year training program, he will be automatically converted to career status without the need to be selected from a register.

He to all -
when it coming out
west Bob? We could
use ya! JH

Right Handed ?

Left Handed ? Page 10

BAL?



2

4

3

1

Probably
have
seen
infant
2/19/85

Hi Barb!
Gene

Hi! Barb
good to
see you. even
if only in
the pictures

1. Thomas W. Stewart, Refuge Manager, GS-11, EOD 10/28/84, PFT
2. Yvonne M. Schultz, Outdoor Recreation Planner, GS-9, EOD 10/31/83, PFT
3. Barbara Mitchell, Secretary (Typing), GS-5, EOD 12/14/80, PFT
4. Robert B. Westerman, Maintenance Worker, WG-6, EOD 5/27/84, PFT

A summary of refuge staffing over the past 5 years is shown below.

	<u>Permanent Full-Time</u>	<u>Seasonal</u>	<u>Part-Time</u>	<u>Temporary</u>
FY 85	4			
FY 84	3			1
FY 83	3			
FY 82	2	1		
FY 81	2	1		1

2. Youth Programs

The Mason Neck National Wildlife Refuge hosted a 12 person non-residential YCC camp from June 24 until August 16, 1985. The 6 male and 6 female enrollees were selected by lottery from 57 applications (42 male, 15 female) and included five 15 year olds, three 16 year olds, and four 17 year olds. Two college students hired as group aids assisted the

maintenance man in supervising the enrollees. Recruitment for the enrollees and group aids was through news releases mailed to 18 newspapers, 16 high schools, 7 libraries, 2 TV stations, and 7 radio stations plus personal contacts at 6 colleges.

Major projects for the summer included cleanup of 400 feet of steep bluffs, boundary posting, construction of three buildings, renovation of a garage, and trail and road maintenance. Bluff cleanup was completed and most construction was taken to a stage that could be completed by regular staff. Boundary posting and maintenance work was accomplished but is ongoing and so cannot be considered finished.

Staff expectations were extremely high and so failure to complete a pole shed, an environmental education shelter, and renovation of a garage were disappointing. However, taking into account the experience and skill level of the enrollees and the group aids, the crews worked hard and much was accomplished. These buildings would never have been started or would have had to be contracted out if the camp had not tackled them.

The enrollees' expectations of easy outdoor work with wildlife also had to be altered. Construction and maintenance work predominated causing three enrollees to quit and seek easier jobs. Four were fired when they failed to show up for work, opting to go camping without warning. Two others had to leave because of changes in their families' situations leaving only three enrollees to finish the camp.

Plans for next year's camp include a smaller group permitting more contact and information exchange between staff and enrollees.



Westerman explains footings and transit to YCC. 7/85 YS



YCC pouring slab for pole shed.

6/85 YS



YCC finishing shed for oil storage building.

6/85 YS



Oil storage building built by YCC.

11/85 YS

4. Volunteers Program

Mason Neck is gradually beginning to develop a volunteer program. In the past, scouts and friends or relatives of staff donated time to help on projects. In 1985, scouts still made up the bulk of the volunteer workforce but several individuals started donating time as officially recognized volunteers. John Mattingly helped transport and set up displays at the Fairfax County Fair. Larry Brindza started helping with waterfowl and eagle surveys. Nicole and Jenny Lambert started in November to take responsibility for managing the station's bluebird nesting program.

Several others have filed volunteer agreements but their schedules and interests have not quite meshed with jobs that needed to be accomplished. The main problem so far has been staff time to orient the volunteers and develop activities that benefit both parties. A meeting was held on November 13 to talk to the volunteers, explaining our needs and some of the refuge's management programs.



Scouts were our main source of labor for moving woodchips.

3/85 YS

← 50% 50% ?



Eagle scout Schmiesing and work-party levelling trail near Eagle Point.

9/85 YS

Table 1

<u>Name/Group</u>	<u>Activity Hours</u>	<u>Activity</u>
Larry Brindza	8	Bird surveys
Elaine Haug	2	Eagle survey
Nicole and Jenny Lambert	8	Bluebird recovery program
John Mattingly	8	Display setup/takedown
Billy Pulliam	16	Construction--oil storage shed
Val Urban	16	Deer survey
BSA Troop 629	30	Trail rehabilitation
BSA Troop 995	93	Build wood duck nest boxes Measure trail Trail rehabilitation
BSA Troop 1518 Schmiesing-Eagle Scout	134	Replace footbridge Trail rehabilitation
BSA Troop 1532	75	Trail rehabilitation
BSA Troop 1849 Roepcke-Eagle Scout	88	Trail rehabilitation
BSA Troop 1952	24	Trail rehabilitation
GSA 92-Brownies	54	Trail maintenance
GSA 172	42	Trail rehabilitation
GSA 409	<u>57</u>	Trail rehabilitation
Total:	655	

5. Funding

The funding situation in FY 86 was drastically reduced from FY 85 and will limit the amount of refuge operations and maintenance which can be accomplished during 1986.

The following table depicts the status of refuge funding over the last five fiscal years.

Table 2

<u>Fiscal Year</u>	<u>Appropriation</u>	<u>Source</u>
1986	173,700:	
	150,700	1260
	23,000	1520
1985	230,500:	
	197,000	1260
	33,500	1520
1984	124,000:	
	113,800	1260
	10,200	1520
1983	84,000:	
	32,000	1210
	2,000	1220
	46,000	1240
	4,000	1400
1982	71,000:	
	22,000	1210
	1,000	1220
	44,000	1240
	4,000	1400

FY 85 funds include a special appropriation of 20,000 for public use projects at Mason Neck.

6. Safety

There were no lost time accidents on the refuge during 1985. Only two accident/incident reports were filed, both relating to the YCC. One enrollee came down with a severe case of poison ivy. Another enrollee cut his finger on a steel rod necessitating some minor first aid.

Informal safety meetings were held throughout the year.

All YCC enrollees completed a basic first aid course.

Manager Stewart, maintenanceman Westerman, and ORP Schultz completed a defensive driver training course on February 5.



Westerman received Certificate of Completion of Tractor Safety training from Stewart. 9/85 YS

8. Other Items

Manager Stewart attended the Wildlife Resources Project Leaders meeting at Leetown, West Virginia.

Maintenanceman Westerman attended tractor safety training at Eastern Shore of Virginia National Wildlife Refuge.

F. HABITAT MANAGEMENT

1. General

Located along the Potomac River, 18 miles south of Washington, D.C., the refuge covers 1,980 acres, a portion of which (789 acres) is managed under a 60 year lease. Approximately 80 percent of the refuge consists of hardwood forest, primarily oak and oak-beech areas. The terrain is gently rolling and culminates in steep (up to 50 feet) bluffs along the Potomac River.

2. Wetlands

The 285 acre freshwater tidal Great Marsh is the largest marsh in Fairfax County, accounting for nearly one-third of the county's remaining wetlands.

The remnants of several man-made impoundments and weirs exist on refuge wetlands, however, none are manageable in their current condition. Approximately 75 acres of freshwater pools are maintained by beaver dams.

3. Forests

Raccoon Creek and High Point Creek together with smaller refuge tributaries inundate approximately 200 acres of forestland areas. These areas provide valuable nesting habitat for wood ducks and for a large great blue heron rookery.



Whitetail deer utilizing edge habitat along road.

6/85 YS

5. Grasslands

The refuge contains approximately 20 acres of grassland. Grassland areas were mowed in late August to inhibit invasion by woody species. Historic photos indicate perhaps 200 acres of grassland/shrub areas existed at one time. These grassland communities were not maintained and current refuge equipment is inadequate for the task.

9. Fire Management

No prescribed burns are conducted at Mason Neck and fire related activities center around presuppression and suppression work.

A new fire truck, gasoline engine powered back-pack pumper, and trailer mounted pumper were purchased during 1985. In addition, 1500 feet of fire hose and four neoprene 5 gallon hand generated pumpers were purchased. We are still in need of a dozer to assist with clearing 12 miles of fire trails and with suppression activities.



New trailer mounted pumper.

12/85 RW

10. Pest Control

Twenty gypsy moth pheromone traps were placed along refuge roads and in parking areas during early summer. This was a cooperative effort with the U.S. Department of Agriculture (USDA). The traps were examined twice during the summer, male moths were counted and discarded and the results were sent to USDA for their data uses. Low numbers of male gypsy moths were encountered, however, population levels are increasing in northern Virginia.

G. WILDLIFE

1. Wildlife Diversity

Despite its location within a large metropolitan area, the refuge has retained much of the wildlife diversity present during colonial times. Numerous animals including 211 species of birds, whitetail deer, river otter, beaver, wild turkey, etc., routinely utilize refuge resources.



Painted turtle laying eggs.

6/85 YS

2. Endangered and/or Threatened Species



Clandestine meeting of young eagles on the ice. 12/85 RW

The Mason Neck bald eagle population had a banner year in 1985. Peak population numbers occurred in December when 24 eagles were observed on the area. This represents a 100 percent increase over 1984. Eagles were observed during every month with greatest numbers occurring during the November to February period when the winter roost is most active.

State park superintendent Warren Wahl and refuge manager Stewart observed two adult eagles exhibiting territorial behavior in an area adjacent to the roost site. We suspect a second nest may exist on the Mason Neck area, but will be unable to confirm it until the spring of 1986.



This bald eagle buzzed the local birding club at about 75 feet. 11/85 RW

The news on our nesting pair is bad this year. The birds abandoned their nest and eggs at some point between late January and early March. An initial flight by a National Wildlife Federation biologist indicated our pair was actively incubating; the next flight in early March confirmed the pair had abandoned their nest. During the period between the two flights, the Mason Neck area was plagued by daily flights of low flying helicopters. The helicopters would often fly at just above treetop level. The Fort Belvoir Davison Airfield commander was notified about the low flying helicopters and assured us the problem would be taken care of. However, the low flights persisted until the local newspaper printed an article detailing the problem. The Army immediately cried "foul" and accused refuge manager Stewart of smearing the Army's reputation in the local press.

The problem of low flying helicopters and private craft continue at a decreased level. Perhaps it is time to reevaluate the current Federal Aviation Administration guidelines which recommend but no longer require a 2,000 foot limit over National Wildlife Refuges.

3. Waterfowl

Mallard, black ducks, wood ducks, and common mergansers are the most commonly observed waterfowl on the refuge. Water conditions were poor in the spring and summer and waterfowl use days took a dramatic drop. Total use days in 1985 were 117,690 as compared with 176,000 use days in 1984.

Canada geese were often observed during migration, however, their use of refuge areas was minimal.

4. Marsh and Water Birds

Great blue herons, great egrets, and green-backed herons make up the majority of this category.

The population of great blue herons declined over 20 percent to 720 birds. The total number of nests also declined over 20 percent and a total of 338 young were produced. The population decline may have been related to the severe drought conditions which existed during spring and summer.

The High Point Creek rookery is one of the largest on the east coast and will be closely monitored to determine if other factors may be resulting in a population decline.

5. Shorebirds, Gulls, Terns and Allied Species

Gulls make up the bulk of use by this group. Predominant shorebirds frequenting the Great Marsh and Potomac shoreline are greater yellowlegs and spotted sandpiper.

6. Raptors

Several species of raptors including osprey, red-tailed and red-shouldered hawks utilized the refuge this year.

7. Other Migratory Birds

The annual Christmas Bird Count was conducted on January 4. Outdoor recreation planner Schultz participated in the census. The number of species observed was 109.

8. Game Mammals

River otter were again sighted on Mason Neck. Sightings have been made annually since 1982 following a hiatus of 11 years.

Beaver are abundant on the refuge and surrounding lands. Beaver ponds provide our only impounded water. We do not have an accurate estimate of our whitetail deer population. The animals are regularly observed along refuge roads, but no obvious signs of overpopulation are present.



This ~~nearsighted~~ ^{RABID} gray fox pup would let staff get within 6 feet. 5/85 YS

16. Marking and Banding

This station is assigned a banding quota of 100 black ducks. Our banding operation came to a grinding halt when below zero temperatures froze all water areas and refuge waterfowl headed south. No birds were banded in 1985.

17. Disease Prevention and Control

There was no observed incidence of disease or disease related mortality among refuge wildlife during 1985.

The rabies outbreak in Virginia appears to have leveled off with most cases being reported from northern Virginia. The primary vector being reported is the raccoon which indicates the possibility the disease first occurred in transported animals, because the primary foci of raccoon rabies is in south-central Georgia.

H. PUBLIC USEI. General

In the past, visitor use has been limited to the Woodmarsh Trail from April through November during daylight hours. The refuge was closed the rest of the year to limit disturbance to wintering or nesting eagles. School or special interest groups were permitted use of a "buffer" zone adjacent to the trail for environmental education, photography, or wildlife observation.

Visitation started changing in April with the opening of the state park (see J.1). More visitors came, drawn by curiosity about the park and stopped at the Woodmarsh Trail as the first facility they encountered when entering the area. Many returned and hiked the trail as an alternative to paying the park's entrance fee or parked at the Woodmarsh Trail parking lot and bicycled or walked into the park to avoid the fee.

Problems could be foreseen when the refuge would close for the winter but the road would remain open for access to the park year-round. Therefore, an alternative refuge winter trail was opened. This Great Marsh Trail leads through less critical habitat and had already been a problem area for ATV trespass. Its opening proved popular, little trespass at the Woodmarsh Trail has occurred, and hikers have discouraged the ATV traffic.

Visitation totalled 8,111 for an 11 percent increase over 1984. April and October were, as usual, each over 1,000 visitors. Though there has been an increase in visitors seeking more non-wildlife oriented activities, most are still non-consumptive and wildlife oriented, with environmental education a significant portion (13 percent).

Table 3

<u>Year</u>	<u>General Visitation</u>	<u>Visitation</u>	
		<u>Environmental Education</u> <u>Students</u>	<u>Teachers</u>
1981	6,966	2,205	277
1982	4,689	1,012	330
1983	5,271	673	48
1984	7,265	844	89
1985	8,111	959	111

2. Outdoor Classrooms - Students

The refuge experienced a 13 percent increase in environmental education over 1984 primarily because of better access. The state park's paved road and maintenanceman Westerman's efforts on Sycamore Road's gravel surface brought back many of the Fairfax County schools whose buses had refused to travel these two roads. The Chesapeake Bay Foundation and the Fairfax County schools accounted for 21 percent of our environmental education.



Chesapeake Bay Foundation staff led canoe and sampling tours along the refuge shoreline and in the marsh. 5/85 YS

Another 117 students had been scheduled but because of rain, programs were given at their schools. These and other groups of students and scouts who could not get to the refuge received programs almost identical to what they would have received on the refuge. This represented another 776 students who received environmental education from refuge staff. That figure was not countable under the present reporting procedures.

Table 4Environmental Education - Students

<u>Year</u>	<u>Month</u>												<u>Total</u>
	<u>J</u>	<u>F</u>	<u>M</u>	<u>A</u>	<u>M</u>	<u>J</u>	<u>J</u>	<u>A</u>	<u>S</u>	<u>O</u>	<u>N</u>	<u>D</u>	
1981	0	0	94	187	187	601	381	157	6	290	302	0	2,205
1982	0	0	50	218	166	279	41	83	0	115	26	34	1,012
1983	0	0	0	297	225	0	0	0	0	47	90	14	673
1984	0	0	14	0	494	129	22	0	0	144	27	14	844
1985	0	0	0	34	522	0	110	0	140	133	20	0	959



SIGNET-Bennett students learn what territories are as ribbons define their territory and blue represents needed water.

11/85 YS

3. Outdoor Classrooms - Teachers

Two Project WILD workshops were conducted with the first being at an elementary school followed by an orientation tour for the teachers and the second cosponsored by the Mason Neck State Park and held in their visitor center. Each was well attended and produced results with field

rips to the refuge and requests for programs, audio visual materials, and exhibits. A third workshop through the Northern Virginia Community College was cancelled because the course would not meet county accreditation requirements.



Dr. John Gottschalk speaking to teachers during Bay Days '85.

10/85 YS

A third workshop entitled Bay Days '85 was cosponsored by the refuge, Mason Neck State Park, Pohick Bay Regional Park, and the Citizen's Program for the Chesapeake Bay. Staff from each agency presented programs or conducted activities for 50 teachers and concerned citizens during the 2 day event.

Lack of facilities has forced most portions of the workshops to be conducted off the refuge. This problem will be remedied by the new environmental education pavilion started by the YCC and finished by the maintenance man.

Table 5Environmental Education - Teachers

<u>Year</u>	<u>Month</u>												<u>Total</u>
	<u>J</u>	<u>F</u>	<u>M</u>	<u>A</u>	<u>M</u>	<u>J</u>	<u>J</u>	<u>A</u>	<u>S</u>	<u>O</u>	<u>N</u>	<u>D</u>	
1981	0	0	5	34	8	65	28	67	18	20	32	0	277
1982	0	0	4	24	32	39	7	90	94	21	7	12	330
1983	0	0	0	28	20	0	0	0	0	0	0	0	48
1984	0	0	0	0	2	0	0	50	24	13	0	0	89
1985	25	0	10	0	0	0	0	0	0	50	26	0	111

4. Interpretive Foot Trails

The refuge has two foot trails, the Woodmarsh Trail open April through November, and the new Great Marsh Trail opened December 21 as a winter trail. The Woodmarsh Trail wanders 3 miles through oak, hickory, and beech forests and gives access to the center one-third of the Great Marsh. The Great Marsh Trail enters the refuge from the southeastern corner and runs about three-quarters of a mile to a corner of the Great Marsh allowing visitors to view the marsh with minimal disturbance to wintering eagles.

A total of 6,399 visitors used the Woodmarsh Trail almost matching the 6,374 visitors that used it in 1984. The park visitor center started closing weekdays in October and finally closed by November. Visitors unable to get maps or brochures at the state park took advantage of the well stocked and posted Woodmarsh Trail to enjoy fall on the refuge. Only 4,202 people took advantage of the self-guiding trail brochure as compared to 4,240 last year, but 228 participated in guided walks either as part of a group or on advertised programs for the general public.

The Great Marsh Trail, opened to give visitors the opportunity to view the marsh, eagles, and waterfowl during the winter has been very popular despite little advertising and limited hours. In cooperation with the local community, the trail is only open from 8:00 a.m. to 4:30 p.m. daily. Between its opening date of December 21 and 31, over 199 visitors, primarily locals, used the trail. Wildlife viewing proved excellent with one volunteer reporting 5 eagles making 38 passes at a crippled duck before catching it.

. Interpretive Exhibits/Demonstrations

One of two displays on the Woodmarsh Trail was vandalized in March and had to be removed, leaving only one display. Panels explaining the refuge system, Mason Neck, and management practices were purchased from Wilderness Graphics through special Regional Office funding and will be placed in a display at either the Woodmarsh or Great Marsh Trail parking lot as soon as plans for a standard kiosk are received from the Regional Office.



Wilderness Graphics panel explaining the purpose of the refuge.

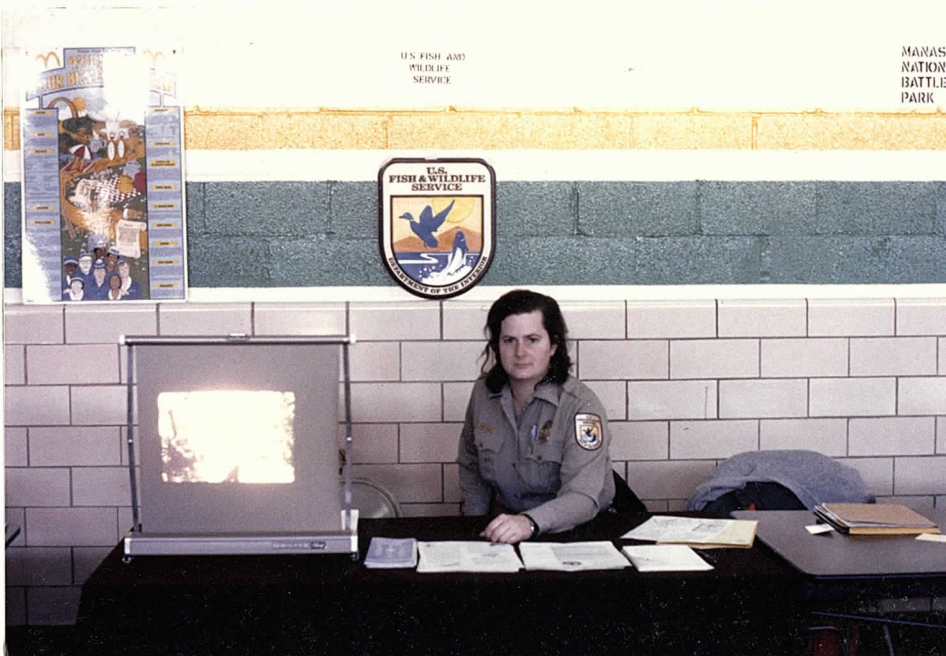
10/85 YS



Panel explaining management techniques.

10/85 YS

For off site use, the refuge maintains a System 70 with panels that can be varied depending on the occasion, 2 small dioramas showing pond life, a small display on endangered species, 2 video tapes, 6 films, and 22 slide shows. These were displayed at the Fairfax County Festival and several schools.



ORP Schultz staffing careers exhibit at Prince William County Youth Jobs Fair.

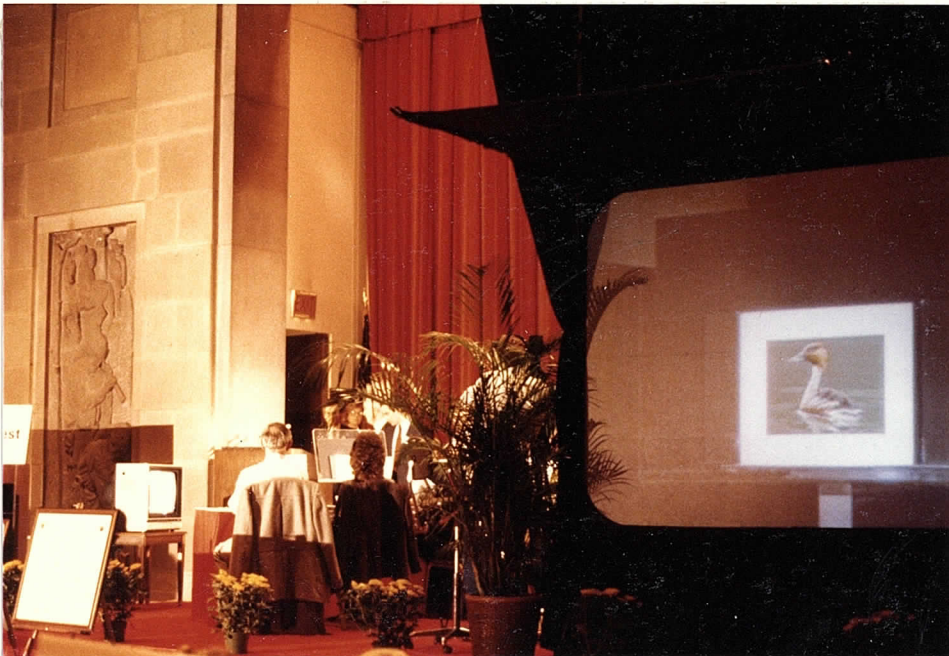
1/85 NPS

7. Other Interpretive Programs

The refuge experimented with scheduled walks and programs this summer and coordinated activities and publicity with the state park. Programs included several talks about insects, a family oriented game about animals and their habitat, and a walk along a portion of the Woodmarsh Trail with van transportation to and from the parking lot. Turnout was poor, primarily because of irregular scheduling and limited advertising.

Staff continued to provide off site programs to senior citizen groups, nursing homes, and special interest groups when possible, this year logging 13 programs to a total of 271 people. The ORP and refuge manager were also active as science fair judges and speakers at career day events.

ORP Schultz was asked along with Vidal Martinez and Heather Nicklas of Blackwater National Wildlife Refuge to assist at the 1985 Duck Stamp Contest. They answered visitors' questions, assisted with the handling of the entries, and provided increased Service visibility with their uniformed presence.



Judges' area and winning entry for 1985 Duck Stamp Contest.
11/85 YS

11. Wildlife Observation

Most people come to the refuge for wildlife observation. Visitors had some of their greatest success in 1985 in seeing eagles with the Great Marsh Trail open during their peak winter concentration and a record 33 eagles thought to be in the area. Occasionally, visitors misidentify eagles, usually not realizing the birds they saw were immatures lacking the obvious white head and tail.

Deer also were highly visible along the shoulders of High Point Road. Traffic regularly increased around dusk as locals drove through checking on the presence of their favorites and necessitating contacts by both state and refuge personnel for either blocking traffic, pulling off in unsafe areas, or using spotlights illegally.

12. Other Wildlife Oriented Recreation

Photography remains popular on the refuge with approximately 15 percent of the visitors taking photographs. The photoblind still did not get much use and will probably be relocated during 1986 to a more desirable location.

16. Other Non-Wildlife Oriented Recreation

With the opening of the state park and improvement of High Point Road, bicycle use increased. Some were seeking a quiet area to ride while others were trying to avoid paying the park's entrance fee. Seeing bikes being loaded or unloaded in the Woodmarsh Trail parking lot became a common sight and an estimated 324 cyclists used High Point Road through the refuge.

17. Law Enforcement

Vandalism was on the rise in 1985. During March when staff and volunteers were getting the Woodmarsh Trail ready for opening, they found where letters had been scratched off signs, interpretive marker posts pulled up, and both displays scratched. One display was so badly damaged, it had to be removed. A small trailer had its hitch stolen and numbers on posts were scrambled.

As the season progressed, one bench was pulled out of the ground, another had a board torn off, and numbers continued to be moved around. Carving on trees also increased.

The regional park reported problems too, mainly from transient construction laborers in their campgrounds and the refuge may have received some spillover. Access for violators was also easier this year because of the state park's improved road and more liberal hours.

Refuge and state park personnel patrolled frequently. Teamwork did produce a blatant firecrackers case and two would-be deer poachers being apprehended before they got set up.

The highlight of the law enforcement year was on Thanksgiving Day. Stewart and Schultz were doing a routine waterfowl patrol and had checked one suspicious pair who had landed illegally next to refuge land. As the officers continued to patrol, they observed another boat running along the shoreline and began following it. It sped up and after continued pursuit dropped two illegally taken deer overboard. Stewart and Schultz finally caught up to the boat which had six men armed with shotguns who turned out to be some of the most notorious poachers in the area. They were escorted to shore and the local game warden and police were called for backup. The men were charged by Fairfax County police for illegal possession of deer in Virginia where they dumped the deer; interstate transport of the deer (Lacey Act) by Stewart and Schultz since during the chase the men had crossed from Maryland into Virginia waters; and when those cases have cleared, will be charged by Maryland for illegal possession in their waters. This case will run into 1986 with events getting more interesting with threats being made against the refuge officers and one of the violators being found to be a convicted felon. Three of the six individuals had prior criminal records and one is being charged with a Title VII, 1968 Gun Control Act violation.



Sometimes you just can't win. Vandals found it easy enough to get in and destroy a display and as Westerman and Stewart try to haul it out, the trailer which had previously been vandalized, breaks down. 4/85 YS



Handy for
stringing it
up in a
tree!
JEW

Who said it couldn't be done. Yes, this is a cat on a
leash.

6/85 YS

2. 10' (5' fire)
There is a way
behind it!
JG.

That wouldn't st
me! 6/86

I. EQUIPMENT AND FACILITIES

.. New Construction

This year was a busy year for Mason Neck in terms of force account construction. Two 20' x 40' pole sheds were constructed. Each shed was constructed on a 20' x 40' reinforced concrete slab. The concrete was contracted but the labor was refuge and YCC. One pole shed will be used for equipment storage and was constructed behind our current shop. The second pole shed was constructed just off of Sycamore Road; it will be used for environmental education purposes and provides a covered area for presentations to school groups and other interested organizations. Roofing was a joint contractor/force account effort.

There is a theory
that people who
have a blind
hatred of cats are
reincarnated rats
D.



YCC started the Environmental Education pole shed. 6/85 YS



Westerman finished the environmental education pole shed.
9/85 RW

12' x 14' enclosed shed was also constructed during 1985 and will be used for small equipment storage; this shed also was constructed on a reinforced concrete slab.



Equipment shed 90 percent completed by YCC. 12/85 RW

A new 40' by 50' parking area was constructed just off of Gunston Road which will supply parking spaces for our new trail. The area was cleared using group leader, YCC and refuge labor. A contractor was hired to remove tree roots and rough spread gravel. All finish work was completed by refuge maintenanceman Bob Westerman.

Bob deserves a tremendous amount of credit for our construction success and without his conscientious effort little, if any, of the above projects could have been completed.



Westerman directs contractor clearing Great Marsh Trail
parking lot. 11/85 YS



Great Marsh Trail parking lot.

11/85 RW

2. Rehabilitation

Woodmarsh Trail parking lot finally received its chip-n-seal finish. The contract was originally issued in April of 1984, however, it was the summer of 1985 before the work was completed. Numerous phone calls from refuge and Regional Office staff were necessary before the contractor was prodded enough to complete the job.

The 20' x 18' frame shed attached to the back of our shop was torn down using YCC labor. The shed supports were infested with wood borers and the cinder block walls were slipping from their footings. New footings were poured and a joint contractor/Westerman effort resulted in new cinder block walls. The new walls will be the starting point for completing and enclosing the shed in 1986.



Westerman and contractor replacing cinder block walls at rear of YCC building. 11/85 YS

A new water softening system was installed on our shop water line. The new system makes the water much more palatable. Prior to this installation, YCC members refused to drink the water, and for good reason; the smell and taste were terrible even though the county health department certified the water was safe to drink.

A furnace, salvaged from one of last year's demolished buildings, was installed in the shop to provide much needed winter warmth.

Sycamore Road, Anchorage Road, and High Point Road each received a healthy dose of much needed gravel during 1985. Sycamore Road was in such bad shape that county officials were refusing to permit school buses to transport students to our environmental education area. All road grading was force account and completed using our only large piece of equipment, a John Deere tractor.



Westerman directing placement of gravel on road to boat ramp. 4/85 YS

4. Equipment Utilization and Replacement

A new Dodge crew cab was received in 1985. The vehicle will be used as our refuge fire truck. The truck was fitted with a bed liner, light bar, and heavy duty winch by local contractors. The truck was a much needed addition to our equipment pool.

Several items were purchased for our John Deere tractor. A new front bucket was purchased to replace our badly worn bucket. The bucket takes a lot of abuse during road grading operations. Maintenance man Westerman welded strips onto our old bucket which we will continue to use for road grading operations, saving our new bucket for less damaging work. We also purchased a new disc and a post hole digger for our tractor and also a fork lift set. The tractor has become quite a utility vehicle and permits many different jobs to be completed at a fraction of the cost of purchasing specific duty vehicles.



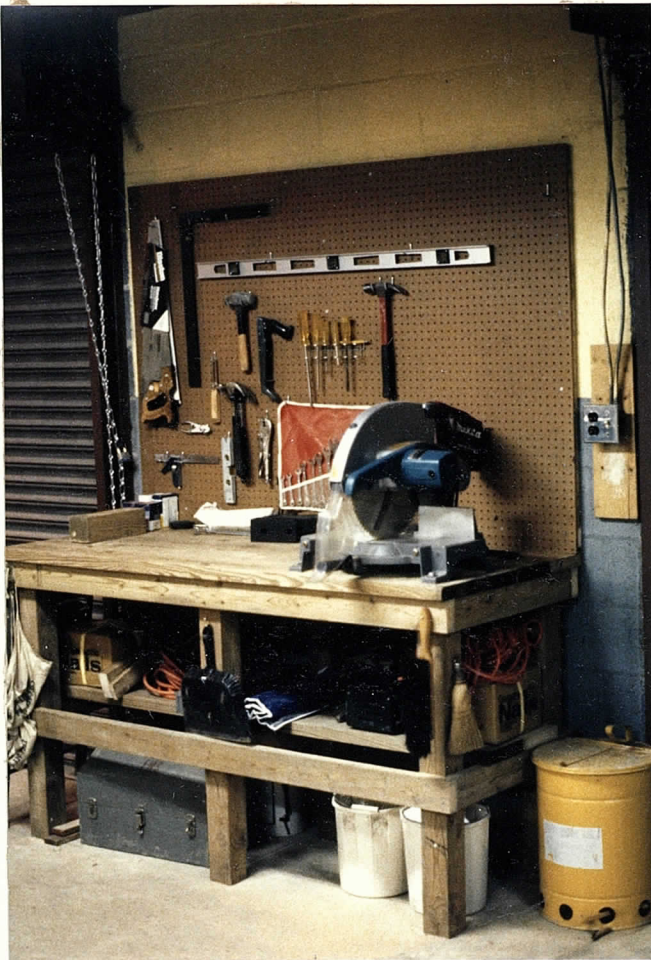
Westerman and Stewart examine new boat motor. 2/85 YS

Two new boats and outboards were purchased during the year. A 14-1/2' and 12' aluminum boat were purchased from MonArk Boats. The only problem occurred when they sent four boats instead of two. We, of course, declined to accept shipment on two boats, however, MonArk was slow in realizing we ordered only two and were going to pay for only two. New 25 horsepower and 8 horsepower Evinrude outboards were purchased for use with our new boats. The new boats and outboards give us added flexibility in working refuge marshes and tributaries.

A Yamaha Moto-4, 4-wheel ATV was purchased for use on refuge trails. It has been a real workhorse and significantly reduced the amount of time necessary to transport people and supplies to work locations inaccessible by conventional vehicles.

Two new fire pumpers were purchased in 1985, a trailer mounted 200 gallon pumper and a gasoline driven backpack pumper.

Several hand and power tools including a table saw, a 14" mitre saw and an oxy-acetylene welding and torch set were purchased.



New work bench and mitre saw. 11/85 RW

The new equipment purchased was a real boon to Mason Neck and enabled us to do an excellent job of rehabilitation and construction at a substantial savings to the taxpayer. As an example, the construction of one of our pole sheds cost less than \$5,000 in materials and labor; a nearby park paid \$20,000 for an almost identical size pole shed and we used better quality materials.

We also purchased four flushing type portable toilets from Monogram Industries. These will be used at our new trail and at our environmental education area.



New portable toilets still fresh in their plastic wrappings.

12/85 YS

not for long!

Several items were purchased to enhance our public use programs including a Panasonic VCR, Kodak slide viewer, several environmental education films, Minolta camera, and several environmental education panels from Wilderness Graphics, Inc.

5. Communications Systems

The refuge purchased new telephones during the year and also purchased a new portable refuge radio. Some time in 1986, Fairfax County police will be switching radio frequencies from the 400 megahertz range to the 800 megahertz range. It is not possible to convert our existing two law enforcement radios and will therefore require a significant expenditure to upgrade to the new frequencies.

Mason Neck acquired two mobile radio units several years ago from the Iroquois Job Corps. One of these units was installed in our new fire truck and the second unit will be converted to a base station for our shop.

6. Computer Systems

The Mason Neck National Wildlife Refuge was identified as one of four refuges in the region to participate in the new RMIS computer system. The system will, hopefully, be in place by mid-summer of 1986. We are optimistic about the potential of the new system and hope it will assist us in better resource management by reducing the paper burden and by providing necessary data more quickly and with greater accuracy.

*Don't hold
your breath Tom
P.H.*

J. OTHER ITEMS1. Cooperative Programs

Mason Neck National Wildlife Refuge cooperates with four other agencies: the Virginia Division of Parks and Recreation (Mason Neck State Park), the Northern Virginia Regional Park Authority (Pohick Bay Regional Park), Gunston Hall Plantation, and the Virginia Commission of Game and Inland Fisheries in managing over 5,000 acres on the Mason Neck peninsula in an arrangement entitled the Mason Neck Management Area. Each agency manages its land by its own guidelines but shares management information and considers suggestions made by the other agencies concerning development. This permits many forms of visitor services ranging from historical interpretation and non-wildlife oriented recreation to areas totally closed and preserved for wildlife, all within a 5 mile radius. Duplication is reduced as is pressure from the public to develop certain forms of recreation and interpretation that are already offered in the area by another agency, e.g., picnic areas are available at Gunston Hall Plantation and the state and regional parks, making them unnecessary on the refuge. The agencies can also cosponsor events sharing manpower, expertise, and facilities, such as the Bay Days event mentioned in the Public Use section.



Our new neighbor.

4/85 YS

Until 1985, few people knew of the state park's role since it was unsigned and closed to the public, but this changed on April 28 with their grand opening. Refuge Manager, Tom Stewart, and Park Superintendent, Ernie Kye,

from Pohick Bay Regional Park were asked by State Park Superintendent, Warren Wahl to cohost the event in keeping with the management area theme. Guest speakers included Dr. John Gottschalk from the International Association of Fish and Wildlife Agencies and Elizabeth Hartwell who had led the campaign for establishing the refuge and park. Over 200 people attended including Dr. Eugene Hester, William Ashe, and Dom Ciccone representing the Service.



Stewart speaking at state park's grand opening. 4/85 YS

Cooperation before, during and since the event has been excellent with the refuge and state park personnel working together on posting the area, staffing the visitor center during the ceremony, sharing maintenance responsibilities and equipment, and coordinating public use activities on both areas.



Making a good start on interagency cooperation--Stewart and state park superintendent Wahl use a state park auger...

4/85 YS



to dig holes for a new refuge sign (Would you believe UNICOR produced this and delivered it in only 7 days from when it was ordered?)

4/85 YS

*Hard to believe!
Kif*

*Head sign can
must have recovered
from stub wounds.*

3. Items of Interest

- February - Refuge Supervisor Ed Moses visited.
- April - Division of Refuges, Washington office staff visited.
- May - Division of Refuges, Washington office visited.
- Soil Bioengineering Corporation and Northern Virginia Soil and Water Conservation District visited to discuss bank stabilization.
- June - Capital Edition television show filmed filler material.
- Regional Director Larsen and AFR Weaver visited.
- July - Regional Director Larsen and Mrs. Larsen visited.
- September - Schultz attended Sharing Nature with Children Workshop in Alexandria, Virginia.
- December - Stewart and Schultz requalified with firearms at Eastern Shore of Virginia National Wildlife Refuge.



Staff from Division of Refuges, Washington office visiting the refuge. 4/85 YS



Mitchell showing Capital Edition film crew the view from
the observation platform. 6/85 YS

4. Credits

Tom Stewart wrote sections A, B, C, E (1, 3, 5, 7, 8), F, G, I, K, and edited the narrative.

Yvonne Schultz wrote sections D, E (2, 4, 6), H, J, and did some of the photography.

Barbara Mitchell typed and assembled the narrative.

Robert Westerman did some of the photography.

K. FEEDBACK

I have just completed my first calendar year as a project leader. During the last year I have been elated, disappointed, surprised, baffled and amazed. Through it all I found the quality of the people working for the Fish and Wildlife Service to be second to none. The dedication to resource concerns is evident from the Director in Washington, D.C., to the secretary, outdoor recreation planner, and maintenanceman stationed at Mason Neck. I have received help and encouragement from all levels of the organization. To all these folks, I say thank you. All of you have made this first year a great one.

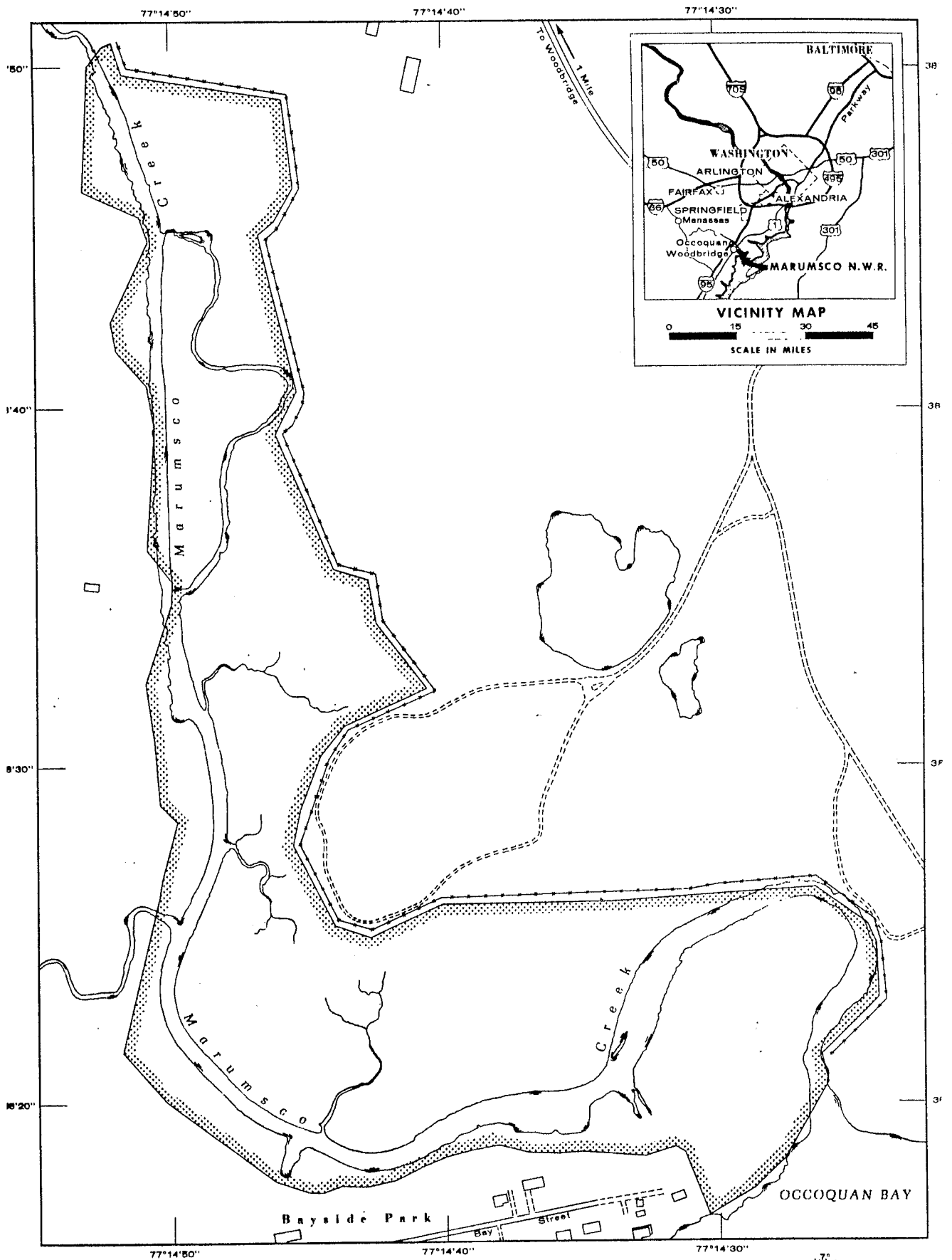
Late in the calendar year when I was hospitalized for major tumor surgery, with an uncertain outcome, I was surprised and uplifted by the number of people sending get well messages. To Bill Ashe, Ed Moses and all the others who called and sent personal notes I thank you. We the people are our own greatest resource and its heartening to realize so many people understand that. I look forward to 1986 and the new challenges and experiences that lie ahead.

MARUMSCO NATIONAL WILDLIFE REFUGE

PRINCE WILLIAM COUNTY, VIRGINIA

UNITED STATES
DEPARTMENT OF THE INTERIOR

UNITED STATES
FISH AND WILDLIFE SERVICE



MARUMSCO NATIONAL WILDLIFE REFUGE

Woodbridge, Virginia

Marumsko refuge consists of 63 acres of freshwater tidal marsh located along Marumsko Creek near its conjunction with Occoquan Bay. It was established in 1973 from lands declared excess by the U.S. Army and is administered by the Mason Neck staff.

No management activity takes place on Marumsko and, in fact, the refuge is visited rather infrequently.

The refuge is used by small numbers of feeding and resting waterfowl and marsh birds. Mallards, black ducks, mergansers, and great blue herons predominate.

Red-tailed hawks and osprey were also seen hunting in the area and there were three sightings of bald eagles, possibly visiting from Mason Neck refuge which is less than 3 miles away.

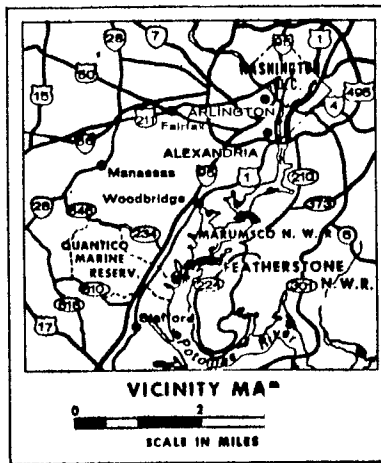
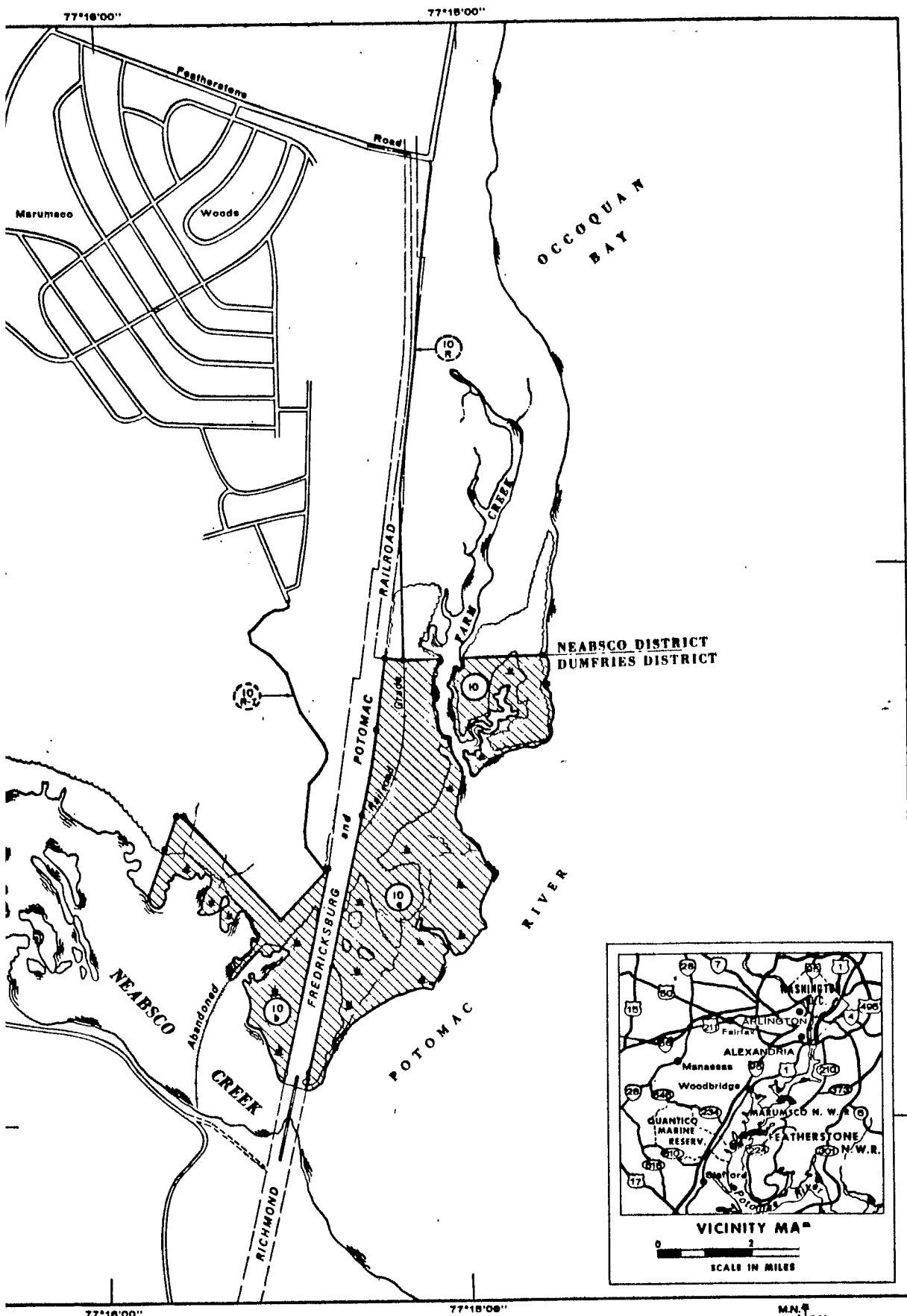
The only public use consisted of visitors viewing the refuge from a trail on the adjacent Prince William County Veterans Memorial Park.

FEATHERSTONE NATIONAL WILDLIFE REFUGE

UNITED STATES
DEPARTMENT OF THE INTERIOR

PRINCE WILLIAM COUNTY, VIRGINIA

UNITED STATES
FISH AND WILDLIFE SERVICE



FEATHERSTONE NATIONAL WILDLIFE REFUGE

Woodbridge, Virginia

Featherstone refuge is located in Prince William County approximately 2 miles south of Mason Neck headquarters, out of which it is administered. The 164 acres of woodland and freshwater tidal marsh along Occoquan Bay and Neabsco Creek were acquired in 1979 from the District of Columbia.

Difficult access to this refuge, along with manpower deficiencies, unfortunately result in fewer staff visits than would be desired. No management activities took place on Featherstone during 1985.

Very little accurate information is available on wildlife populations using this refuge. Waterfowl such as mallards, black ducks and wood ducks are known to frequent the marsh areas and some production is suspected. Bald eagles, osprey and other raptors are occasionally seen flying over the refuge. Great blue heron are seen in the marshes and along the bay shore throughout the year. Muskrat, beaver and deer are known to be present.

No public use is permitted on Featherstone, although a considerable amount of unauthorized activity does occur. The refuge has received reports of some illegal hunting but has not been able to confirm or deny these reports due to poor accessibility and limited staff time.